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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,357	07/17/2006	Suguru Fukui	060532	3094
23850 7590 03/19/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
HSIEH, PING Y				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/586,357

**Applicant(s)**

FUKUI ET AL.

**Examiner**

PING Y. HSIEH

**Art Unit**

2618

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 7/17/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

Claims 1, 3-9 are pending.

Claim 2 is cancelled.

### *Specification*

1. The abstract of the disclosure is objected to because the abstract should be less than 150 words. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 4 recites the limitation "said detection threshold" in lines 6-7 of claim 3 and line 6 of claim 4. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwarz (U.S. PATENT NO. 4,982,176).

-Regarding claim 1, Schwarz discloses a wireless sensor device **(as disclosed in fig. 1-4)** comprising: a sensor configured to sense a target object and provide a sensor signal of varying levels indicative of condition of the target object **(infrared radiation detector 50 as disclosed in col. 3 line 66-col. 4 line**

18); a signal processing circuit configured to amplify said sensor signal to give an amplified electric analog signal (**amplifier 60 as disclosed in col. 3 line 66-col. 4 line 21**); a detection circuit configured to receive said amplified analog signal and provide a detection output (Dout) when said electric analog signal goes beyond a predetermined detection threshold (**light control logic and timing circuit 70 as disclosed in col. 4 lines 21-28**); a radio transmitter configured to transmit a radio detection signal (RS) in response to said detection output (**RF transmitter 85 as disclosed in col. 5 lines 16-43**); a power supply configured to provide an electric power to said signal processing circuit, said detection circuit, and said radio transmitter (**rechargeable battery 30 as disclosed in col. 3 lines 57-65**); and a power generating element converting an external energy into said electric power to be accumulated in said power supply (**solar cells 20 as disclosed in col. 3 lines 39-56**) wherein a controller is provided to activate said radio transmitter only in response to said detection output, permitting said radio transmitter to generate said radio detection signal (**as disclosed in col. 7 line 54-col. 8 line 16**), and said radio transmitter comprises: a regulator connected to receive said electric power from said power supply and configured to give an operating voltage for a short time period only upon receiving said detection output (Dout) from said detection circuit (**the rechargeable battery 30 is used to power when utilized an RF transmitter as seen in figs. 2 and 3 and further disclosed in col. 3 lines 56-66**); a clock configured to be activated upon receiving said operating voltage to provide a clock signal (**RF transmission circuit 85 is connected to the collector of transistor 445 and resonates**

when the voltage at the collector of transistor 445 goes high as disclosed in col. 8 lines 3-16); a pulse generator configured to generate, based upon said clock signal, short pulses identifying the presence of the detection output (it is inherent to have a pulse generator to generate a pulse code signal as disclosed in col. 5 lines 23-26); and a driver configured to be activated upon receiving said operating voltage from said regulator so as to radiate said short pulses as said radio detection signal through an antenna (it is inherent to have a driver to drive the transmitted signal when the RF transmitter 85 is utilized and transmit via antenna 87 as disclosed in col. 3 lines 60-65 and col. 5 lines 16-24).

-Regarding claim 3, Schwarz further discloses said controller is configured to provide a normal mode of operating said signal processing circuit at a rated power to obtain said electric signal (Vout) of rated amplitude proportional to said rated electric power (col. 4 lines 19-28), and a sleep mode of operating said signal processing circuit at a reduced power for obtaining said electric signal (Vout) of low amplitude proportional to said reduced electric power (resistance of the photocell 80 prevent the system from turning on lamp 40 unless the dual requirements of low background light level sensed by the photocell 80, and the detection of a moving object sensed by PIR detector 50 are met as disclosed in col. 4 lines 19-30), said detection circuit being configured to have a wake-up threshold which is lower than said detection threshold, said controller being configured to switch said normal mode to said sleep mode when said electric signal (Vout) of rated amplitude becomes lower than said detection

threshold **(photocell 80 during daytime as disclosed in col. 4 lines 19-30)**, and to keep said sleep mode until said low amplified electric signal goes beyond said wake-up threshold, and said detection circuit being configured to give said detection output (Dout) when said electric signal (Vout) of rated amplitude goes beyond said detection threshold in said normal mode **(photocell 80 in low background light level as disclosed in col. 4 lines 19-30)**.

-Regarding claim 4, Schwarz further discloses said sensor is an infrared ray sensor for detection of a motion of said target object of generating infrared ray, said sensor providing said sensor signal which varies in positive or negative directions in response to the motion of said target object **(col. 3 line 66-col. 4 line 18)**, said detection circuit having a threshold selector which provides a detection range (A1-A2) defined by upper positive and lower negative ones of said detection threshold, and also a wake-up range (B1-B2) defined by upper positive and lower negative ones of said wake-up threshold **(resistance of the photocell 80 prevent the system from turning on lamp 40 unless the dual requirements of low background light level sensed by the photocell 80, and the detection of a moving object sensed by PIR detector 50 are met as disclosed in col. 4 lines 19-30)**, said detection circuit including a comparator unit which receives said detection range and said wake-up range selectively from said threshold generator **(resistance of the photocell 80)**, said comparator unit generating a first signal (Cout) either when said electric signal (Vout) of rated amplitude goes beyond said detection range **(it is inherent to have a comparator unit to determine the dual requirements are met as disclosed in**

**col. 4 lines 19-44), and otherwise generating a second signal (Cout), said controller selecting said detection range in response to said first signal (Cout), and selecting said wake-up range in response to said second signal (Cout) (adjustable timer 74 part of the light control logic and timing circuit 70 as disclosed in col. 4 lines 30-44), and said detection circuit providing said detection output only upon seeing said first signal (Cout) in said normal mode (the dual requirements of low background light level sensed by the photocell 80, and the detection of a moving object sensed by PIR detector 50 are met as disclosed in col. 4 lines 19-30).**

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (U.S. PATENT NO. 4,982,176) in view of Gray et al. (U.S. PATENT NO. 6,275,712).

-Regarding claim 6, Schwarz discloses all the limitations as claimed in claims 1 and 3. However, Schwarz fails to disclose said controller is connected to monitor a level of said electric power accumulated in said power supply and to keep said normal mode and disable said sleep mode while said electric power is higher than a predetermined power level.

Gray et al. disclose a battery monitor 126 sends a signal to control processor 118 indicating that battery power level has risen above threshold and

the user is able to set the threshold level for activating power saving function as disclosed in fig. 1 and further disclosed in col. 4 lines 39-65.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify one of the requirements for turning on lamp of Schwarz to be configured as the battery power being higher than a predetermined power level as disclosed by Gray et al. One is motivated as such in order to provide a programmable lighting system based on user's need.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (U.S. PATENT NO. 4,982,176) in view of Motte (U.S. PATENT NO. 7,193,201).

-Regarding claim 7, Schwarz discloses all the limitations as claimed in claim 1. However, Schwarz fails to specifically point out the solar cell is a photovoltaic cell which converts light into electrical energy, and said photovoltaic cell also defining said power generating element for accumulating the electric power into said power supply.

Motte discloses a photovoltaic cell as disclosed in col. 1 lines 11-21.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the solar cell of Schwarz to be a photovoltaic cell as disclosed by Motte. One is motivated as such in order to provide an energy generation not only from the sunlight.

***Allowable Subject Matter***

9. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wlesemann et al. (U.S. PATENT NO. 5,598,066).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PING Y. HSIEH whose telephone number is (571)270-3011. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. Y. H./  
Examiner, Art Unit 2618

/L. N. L./  
Acting SPE of Art Unit 2618

